

Delineating the scope of oral pathology and microbiology: Present scenario and future prospects



Oral pathology (oral and maxillofacial pathology/head and neck pathology) is a specialized field of pathology dealing with the diseases of oral cavity and its associated structures (i.e., teeth, tongue; bony tissue [maxilla and mandible]; joint [temporomandibular joint]; lymph nodes; nerves; structures in neck and blood vessels of the ear, nose and throat [pharynx and larynx]). The qualified doctors of this domain are called oral and maxillofacial pathologists.

As per the Medical Council of India (MCI), dentistry is one of the recognized branches of modern scientific medicine and taught during Phase III of MBBS curriculum as a part of surgery.^[1] As per the Dental Council of India (DCI), oral pathology and microbiology is one of the recognized branches under dentistry.^[2] Therefore, oral pathology is not only a branch of dentistry but also of pathology and, in turn, related to medicine. Like other branches of pathology including neuropathology, nephropathology, hematopathology, pediatric pathology, dermatopathology and oncopathology, oral pathology is also a recognized branch of pathology, and this fact has already been acknowledged by the Royal College of Pathologists, United Kingdom.^[3]

The branch of oral pathology started in India way back in the 1950s, with postgraduation in the 1960s. The present situation of oral pathology as a subject is going through a major crisis. The major reasons for crisis include lack of sufficient number of academic jobs in the dental colleges; the remuneration for the present academic jobs is very meager; lack of research opportunities in Indian dental colleges and employment of general pathologists for diagnosing oral and maxillofacial lesions in most hospitals and diagnostic pathology laboratories, which restricts the scope of practice of oral pathologist. Today, the oral pathologists have also outnumbered the potential job openings.^[4] Considering the mentioned facts, there is a

need to discuss the future prospects in oral pathology and it should be given due consideration before it is too late.

As per the author's right to information to the DCI in 2018, there are 559 MDS seats in the department of oral pathology and microbiology in 174 dental colleges, respectively, across India. However, the sad part is, according to the present number of seats in oral pathology, the vacancies for job openings are not available to oral pathologists. Furthermore, very less number of candidates want to do MDS in the subject of oral pathology by choice because there is a lack of job opportunities, which, in turn, becomes a major reason for less interest in the subject these days. The major reasons for doing MDS for any BDS graduate is to hone up their skills and become a specialist, to have a good job or practice and earn money to lead a decent life. However, oral pathology as a subject is unable to give the expected outcomes in the present scenario. The reasons for the same are mind-set of majority of oral pathologists who have created cocoon around their domain and never tried to understand their potential strengths as oral pathologists. Now, it is high time to find out the solutions to the problems related to the field of oral pathology. The possible solutions include broadening the scope of oral pathology and making it more comprehensive and practical. The interest of undergraduate (BDS) students toward oral pathology should be enhanced during the initial years of BDS. Furthermore, the awareness about oral pathology among professional medical colleagues and general public should be created.

All oral pathologists need to understand their potential strengths. Of all the dental specialties, oral pathology is the foundation subject on which the science of dentistry stands, and this branch is unique in many aspects. It is the only branch of dentistry representing the confluence of basic sciences and clinical dentistry, covering the subjects

of hematology, biochemistry, immunology, serology, microbiology, oncology, histopathology and cytopathology. It is a well-known fact that the prevalence of oral cancer along with other head and neck pathologies is very high in India. Oral cancer is the third most common cancer and accounts for 30% of all malignancies in India. Furthermore, 7.8% of the global cancer burden is contributed by India.^[5] According to the experience of the author, head and neck pathologies constitute 30%–40% of all the cases arising for cytopathology and histopathology in any diagnostic laboratory on routine basis in various forms. However, the irony is, despite our country has a significant burden of oral cancer with many regional cancer centers, none of the cancer centers has employed doctors with MDS (oral pathology) qualification for the diagnosis of oral cancer. Above all, very few cancer hospitals/centers consider MDS (oral pathology) as a requisite qualification eligible for head and neck pathology or oncology fellowship courses.

The major retarding forces behind the growth of oral pathology subject are mind-set of majority of oral pathologists having inferiority complex as compared to other branches of dentistry and competition with general pathologists who also report cytopathology and histopathology cases pertaining to oral and maxillofacial region along with other routine investigations such as hematology, biochemistry, serology, clinical pathology and microbiology. The lack of understanding of the DCI MDS oral pathology curriculum and its application are also contributing factors. Further, there are no clear guidelines regarding authorized signatory for oral pathologists at present by any regulatory government authority.

The DCI MDS oral pathology curriculum should be amended. ENT pathology (neck lymph node dissections; ear, sinonasal tract, nasopharynx, pharynx, larynx, facial, neck skin) and thyroid gland histopathology should be made part of MDS oral pathology curriculum. Fine-needle aspiration cytology (FNAC) from lymph nodes and salivary glands along with soft-tissue swellings pertaining to oral, head and neck region should be started in the department of oral pathology of dental colleges. All the dental colleges with department of oral pathology should have mandatory attachment with medical colleges. Further, more practical exposure to other diagnostic modalities such as routine hematology, serology, biochemistry, microbiology and advanced molecular techniques should be incorporated in the department of oral pathology. The histopathology slides reporting quota should be defined and should strictly be followed by the DCI and academicians along with defined criteria for competency of postgraduate students. Various fellowship courses/postdoctoral certificate courses

in head and neck oncopathology, laboratory medicine and molecular pathology can be started by the Indian Association of Oral and Maxillofacial Pathologists, which can further form a board by the name of the Indian Board of Oral and Maxillofacial Pathology for granting fellowships. National Accreditation Board for Testing and Calibration Laboratories (NABL) accreditation of oral pathology laboratories in dental colleges and private practice can be done. Quality management programs for NABL accreditation can be done by budding oral pathologists, which, in turn, will help them by acquiring the post of quality manager in diagnostic pathology laboratories. Awareness among general public and professional medical colleagues can be done through means of government bodies by including MDS (oral pathology) as one of the qualifications for eligibility in cancer centers and diagnostic laboratories.

Oral pathologists can be employed as a consultant, laboratory administrator and quality manager in diagnostic laboratories; onco-histopathologist in cancer hospitals and oral cancer centers; consultant in dermatology clinics and editor/project in-charge in journal or book publishing industry. The research laboratories can be made mandatory in dental colleges, which will further increase avenues for oral pathologists as oral pathology is one of those unique specialties where research is an integral part of oral pathology. Oral pathologists should be allowed to teach general pathology and general microbiology classes in academics which will further increase job opportunities. Dental/oral anatomy and histology and forensic odontology can also be made as separate departments to increase vacancies. Further, oral pathologists can set up and run their own pathology laboratories/diagnostic centers and practice oral pathology and routine general pathology. To mention, there is mushrooming of pathology laboratories which are run by unauthorized qualified or unqualified lab technicians at majority of places in India which depicts tremendous lack of qualified and authorized workforce in the field of pathology across the nation. Oral pathologists can practice their specialty as per the DCI MDS curriculum and DCI code of ethics. Recently, NABL has considered MDS (oral pathology) as authorized signatory for cytopathology and histopathology cases pertaining to oral and maxillofacial region and hematology cases prescribed by only dental professionals.

Finally, competency is someone's subjective dedication and ability, not based on qualifications only. It is rightly said "survival of the fittest," so the competent people will survive. Therefore, by becoming competent in the subject, making necessary changes in oral pathology curriculum, and incorporating proposed solutions, the

grace of the oral pathology can be maintained as well as groomed.

Oral pathology as a superspecialty seldom makes a cut as a preferred choice of postgraduation and career due to several challenges being faced in the present scenario. The present article discussed the different viable options for the solution of challenges. These include incorporation of appropriate amendments in the DCI MDS oral pathology course curriculum, giving more practical exposure to diagnostic modalities, creating job vacancies, initiation of quality management programs, setup of oral pathology laboratories and development of practical skills to acquire competency in the subject. The fast increasing rates of oral cancer and manifestations of other systemic diseases to oral and maxillofacial region require and will be definitely benefitted by the nurturing of the field of oral pathology.

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